EXHIBIT 33
REDACTED

Project Poirot

http://go/dbm-poirot

PRIVILEGED AND CONFIDENTIAL (PLEASE DO NOT SHARE)

Status: Final

Authors: ███████████████████████

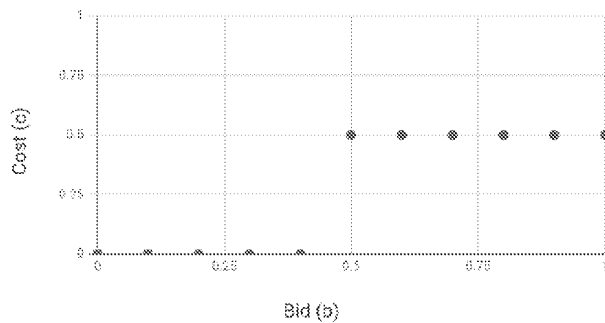*Last Updated: 2017-04-25*

Objective

Over half of DBM bidding goes through third-party exchanges, many of which do not run clean second price auctions. Fixed CPM bidders have the same bid in these unclean exchanges as they do in clean exchanges, which is suboptimal. The goal of Poirot is to discover the exchanges that deviate from second pricing and bid appropriately on these to improve advertiser performance on these exchanges.
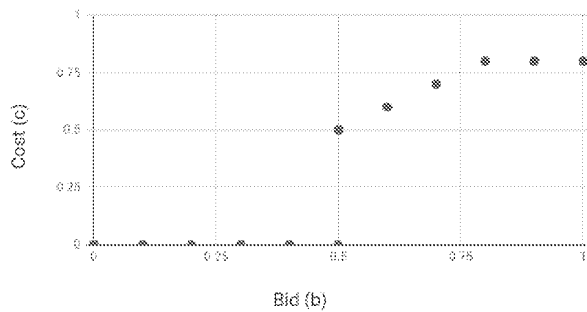
Background

In a second price auction, the price for the winning ad is determined by the bid of the second-highest bidder (or by a reserve price). A bid above this clearing price wins and pays the clearing price; the price does not depend on the advertiser's own bid.

In a true second price auction, bidding low will sometimes cause us to lose an impression, but will never result in us winning the same impression cheaper. <mark>In a non-second-price auction, it is sometimes possible to win the same impression cheaper.</mark> See the following illustrations of a second price and a non-second price auction.

Clean second price auction

Non second price auction

The non-second-price auction may or may not be fully first-price, but it has at least some range of bids where the cost is an increasing function of bid, whereas the second price auction does not.

The above graphs are theoretical examples; however we have measured non-second pricing on